

# Norwegian Citizen Panel

2014, second wave

Methodology report

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April, 2014

### BACKGROUND

This report describes the different stages in establishing the Norwegian Citizen Panel, the practical procedures in recruitment of panel members and the second round of data collection. Furthermore, the report discusses the representivity of the panel and the designing of weights

The Norwegian Citizen Panel was established as a co-operation between the University of Bergen, several institutes at the Faculty of Social Sciences at the University of Bergen and UNI Rokkansenteret.

ideas2evidence are responsible for panel recruitment, administration of the panel members and the technical solutions regarding data collection and computing.

The goal of this project is to establish a cost efficient infrastructure for research that enables researchers to track changes in values and political views over time. There are two separate processes that facilitate the data collection. Firstly, a panel of x amount of members are to be established. The long-term goal is to get the number of panel members as high as possible within the means available. Secondly, the panel members will receive a varying amount of surveys each year, thereby giving researchers cross-sectional data as well as time-series data linked through the panel.

### CONSTRUCTING A PANEL

In the first wave of the Citizen Panel recruitment to the panel and the first survey were conducted simultaneously. A national random sample of 24,942 individuals received a letter with information about the project, and what to do if they were interested in participating. Those who were interested got the opportunity to a) fill out a survey, b) register their e-mail address in order to be a member of the panel.

4,905 individuals answered the **survey** to such an extent that their response was included in the finished data set. This corresponds to a recruitment rate of 19.7 percent. In total 4,870 respondents submitted their e-mail addresses, thereby leaving us with 4,870 **panel members** in the Norwegian Citizen Survey after the first wave - a panel recruitment rate of 19.5 percent

In the second round of the Citizen Panel, no additional recruitment was conducted. The survey was sent out to the respondent who registered their e-mail address in the first round, and thus agreed to become panel members. In the period between the first and second wave a few respondents opted out of the panel. Therefore we started the second wave with 4,863 panel members in total.

Since the respondents in the second wave of data collection are a result of first wave recruitment, it is necessary to detail the first round recruitment process in order to give an overview of how the respondents in the second round came to be panel members. The details of the recruitment process from the first wave are presented below.

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## DRAWING A SAMPLE

Based on international literature we expected the first wave survey to have a response rate of approximately 14 percent<sup>1</sup>. In order to reach our minimum target of 3,500 respondents we therefore had to draw a gross sample of 25,000 people.

The sample was drawn from the “National Population Register” of Norway. This register encompasses everyone born in Norway as well as former and current inhabitants. The Norwegian Tax Administration are responsible for this register but has partly outsourced the administration of it to the private IT-company Evry. Evry drew the sample on behalf of the Citizen Panel after relevant permissions were acquired from the Norwegian Tax Administration.

25,000 people over the age of 18 were randomly drawn from the register. The extracted information was a) last name, b) first name, c) address, d) gender, and e) age. The sample excluded persons without a current home address in Norway.

After receiving the data, everyone over the age of 95 was excluded from the sample. This amounted to 58 respondents, thereby leaving a net sample of 24,942 respondents before the recruitment process started.

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## RECRUITING THE MEMBERS

The recruitment of panel members was done through postal recruitment in two steps.

Firstly, everyone in the sample received a letter, with the following information; a) a description of the project, b) the Citizen Panels policy on privacy and measures taken to protect the anonymity of the participants, c) the time-frame of the project, d) the participants rights to opt out of the panel at any time in the future, if they decided to become a member of the panel, e) contact information of the people responsible for the project, f) a unique log-in id and the web-address to the panels web site, and g) that it would take an estimate of 20 minutes to complete the survey.

In order to maximize the response rate an incentive in the form of entry in a lottery for a travel gift card was added. The value of the gift card was 25,000 NOK. Participation in the lottery for the gift card was dependent upon the respondents supplying their e-mail address and becoming a member of the panel. This incentive was mentioned in all correspondence with the respondents.

The prospective respondents were asked to enter the panel’s web site, and from there to log in to the survey using the unique id-code supplied with each letter.

The letter was sent out on the 6<sup>th</sup> November 2013.

Two weeks later (22<sup>nd</sup> November 2013), a reminder was sent out to the respondents that had a) not logged in to the survey at all, or b) had not completed the survey and at the same time not provided their e-mail address. The respondents who had not completed the survey but had contributed their e-mail address received a reminder to their e-mail account on the 25<sup>th</sup> November.

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<sup>1</sup> Rao, Kumar, Olena Kominska and Allan L. McCutcheon: *Recruiting probability samples for a multi-mode research panel with internet and mail components*. Public Opinion Quarterly, Vol. 74, Spring 2010, pp. 68-84

The postal reminder was sent out as a post card encouraging the respondents to register as members of the panel and made a referral to the letter sent two weeks previously. The post card included the same unique log-in id as the respondents had received in the letter.

**SECOND WAVE OF DATA COLLECTION**

**BUILDING THE SURVEY**

The survey and the panel are administered through the web-based research software Conconfirm. Conconfirm is a so-called "Software-as-a-Service" solution, where all software runs on Conconfirm's continuously monitored server park and where survey respondents and developers interact with the system through various web-based interfaces. This provides very high data security and operational stability. The security measures are the most stringent in the industry and Conconfirm guarantees 99.7 percent uptime. The programming of the survey in Conconfirm is done by ideas2evidence on behalf of The Citizen Panel.

The survey went through two stages of pilot testing before being rolled out to the panel. First an in-depth pilot test comprising ten master students were done. This pilot focused on language, mostly concentrating on the clarity of the questions. Secondly a broader pilot test, where the survey was sent out to 76 bachelor students attending compulsory seminars in methodology was done. The pilot testing must be regarded as successful without any major revisions deemed necessary.

**DATA COLLECTION**

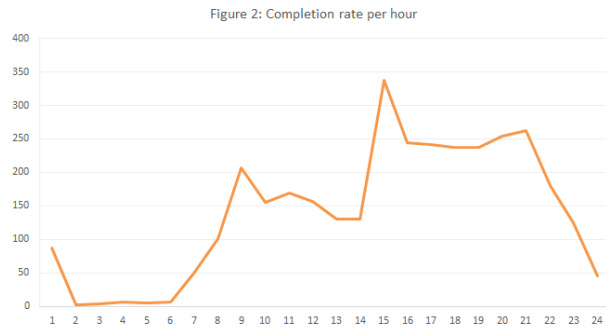
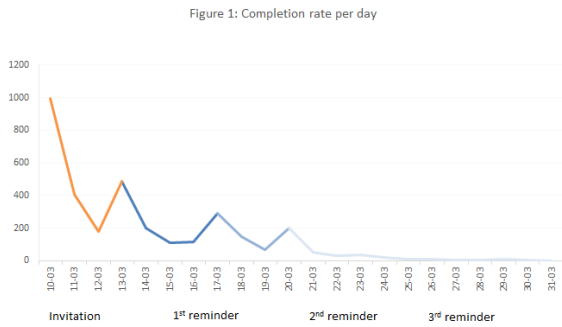
A major difference between the first and second wave of data collection is that while the invitations to answer the first wave survey came as a letter sent through the post, all invitations to the second wave were sent directly to the respondents e-mail accounts. In these e-mails, the basic information about the Citizen Panel was rehashed, and the individual panel members received a unique URL that led to the questionnaire.

**Table 1: Response and response rate by the different stages of data collection**

|   | Response | Cumulative Response | Response Rate (%) | Cumulative Response Rate (%) |
|---|----------|---------------------|-------------------|------------------------------|
| Invitation (10 <sup>th</sup> March)     | 1,666    | 1,666               | 34.4 %            | 34.4 %                       |
| Reminder no. 1 (13 <sup>th</sup> March) | 880      | 2,546               | 18.2 %            | 52.6 %                       |
| Reminder no. 2 (17 <sup>th</sup> March) | 539      | 3,086               | 11.1 %            | 63.8 %                       |
| Reminder no. 3 (20 <sup>th</sup> March) | 287      | 3,372               | 5.9 %             | 69.6 %                       |

In total, the second wave survey received 3,372 completed questionnaires - a response rate of 69.6 percent.

The first invitation to the survey was sent out 10<sup>th</sup> March. In total 1,666 respondents completed the survey in the time period between the invitation and the first reminder (10<sup>th</sup>-13<sup>th</sup> March), a response rate of 34.4 percent. In total 3 additional reminders were sent out to the respondents. For details on the number of respondents after each reminder, we refer you to table 1.



There is a substantial difference in response patterns between the first and the second wave of the survey, mainly due to the methods used when inviting and reminding the respondents. Wave 1 had a very long period of data collection (10<sup>th</sup> November – 5<sup>th</sup> January). There was a substantial and long tail of slow responding respondents after the invitation as well as the reminder. In the second wave, the response activity declined much faster after each prompt, calling for a more frequent use of reminders. We believe that the physical presence of letters versus a more easily forgettable e-mail explains these differences.

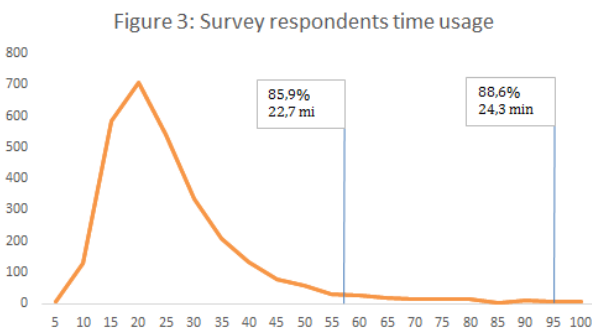
In connection with the second wave, an experiment was conducted. In order to optimize the response rate, we wanted to know if the response would vary depending on when during the day the respondents received the email invitation.

The sample was randomly assigned to two different equally sized groups, where one group was sent the invitation and the first reminder at 09:00 am, while the second group was e-mailed at 15:00 pm. This explains the two peaks in completion rate illustrated in figure 2.

In sum the response rate of these two groups did not vary. Time of e-mailing does not seem to affect the response rate. This means that for the future there is a certain degree of flexibility when it comes to time of e-mailing. Since the response rate did not vary, reminder no. 2 and 3 for both groups were sent at 15:00 pm.

## TIME USAGE

During the large N pilot, time spent on the questionnaire averaged 15 minutes. In comparison, survey respondents who completed the questionnaire averaged 22.7 minutes. The challenge measuring average time usage is that respondents may leave the questionnaire open in order to complete the survey later. This idle time causes an artificially high average for completing the survey. The average of 22.7 minutes therefore only includes the 86 percent of the respondents, which used less than, or equal to, 60 minutes.



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## NON-RESPONSE OF SURVEY RESPONDENTS AND PANEL MEMBERS

As defined in the documentation report from wave 1, panel members are those respondents who entered their e-mail addresses, regardless of whether they completed the questionnaire or not. Survey respondents are defined as respondents who completed a substantial share of the questionnaire.

4,863 panel members were emailed the invitation letter. 10 respondents did not receive the invitation due to non-working e-mail addresses, and 10 respondents contacted us wanting to opt out of both the second and future waves. Out of the 4,843 remaining panel members, 73.7 percent entered the survey, while a sum of 1,270 panel members did not enter the survey at all. The completion rate of the panel members accessing the questionnaire was 92 percent (3,302/3,573). The number of respondents accessing the survey without completing the questionnaire is thus small.

**Table 2** Crosstab of respondents in wave 1 and 2

|                |     | Respondent w02 |       |
|----------------|-----|----------------|-------|
|                |     | No             | Yes   |
| Respondent w01 | No  | 43             | 13    |
|                | Yes | 1,428          | 3,359 |

Table 2 shows that 3,359 panel members answered the first as well as the second wave of the survey. Of the 56 panel members who did not answer the first wave, 13 answered the second wave. This leaves 43 panel members who declined to answer both waves. A fairly large share of the panel members, in sum 1,428 members, answered the first wave, but did not answer the second wave.

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## REPRESENTIVITY

This section describes the representativeness of the net sample of survey respondents for the second wave.

There are two main challenges related to non-response and representativeness in the second wave:

- ◆ the motivation and interest of the respondents
- ◆ the bias inherited from the panel recruitment process which potentially could be amplified in the second wave

The first challenge, motivation and interest, is often explained by the respondents level of education and/or age. Younger respondents might not feel the commitment to answer the survey. Less educated respondents are less likely to find the interest to answer the survey. The second challenge, existent bias among the panel members, is due to the fact that groups who are more inclined to answer already are over-represented and groups who are less inclined to answer already are under-represented in the gross sample for the second wave.

In addition to age and education, variables of geography and gender are applied to test the representativeness of the survey respondents. The variables have the following categories:

- ◆ **Age:** 19-29 years, 30-59 years, 60 and above
- ◆ **Highest completed education:** no education/elementary school, upper secondary, university/university college.
- ◆ **Geography:** Oslo/Akershus, Eastern Norway, Southern Norway, Western Norway, Trøndelag, Northern Norway.

The sampling frame of the survey is Norwegians above the age of 18, comprising a population of approximately 3.9 million individuals. The distribution of men and women in the population is 49.9 percent and 50.1 percent respectively. The distribution of men and women in the net sample of the second wave is 50.3 percent men and 49.7 percent women. In other words, men are slightly over-represented.

**Table 3: Age distribution in the population and the net sample**

|                  | 18-29 years | 30-59 years | 60 years and above |
|------------------|-------------|-------------|--------------------|
| Population       | 20,3 %      | 52.1 %      | 27.6 %             |
| Net sample - w01 | 18.0 %      | 57,1 %      | 24.9 %             |
| Net sample - w02 | 15.4 %      | 56.4 %      | 28.2 %             |

The age distribution in table 3 shows that the age groups of 18-29 years and 60 years and above are under-represented in the net sample of the first wave. When it comes to the first group, this is probably due to motivation as well as incongruity between registered mail address and actual address of residence. When it comes to the latter group, lack of familiarity with the internet as well as low response rates in surveys in general are the main reasons.

In the net sample of the second wave, the age group of 18-29 years is even more under-represented than in wave 1, while the age group 60 years and above is now over-represented. This is explained by the fact that 79 percent of the respondents of the oldest age group answered the second wave. The corresponding number for the respondents in the age group of 18-29 years is 57 percent. Once recruited, it seems that older people are more inclined to answer the surveys than the other age groups. When it comes to the youngest, the lower response rate from the first wave is reinforced in the second, thus causing an increasing level of under-representation.

**Table 4: Combined distribution of age and gender in the population and the net sample of the first and the second wave**

|                  | 18-29 years |       | 30-59 years |        | 60 years and above |        |
|------------------|-------------|-------|-------------|--------|--------------------|--------|
|                  | Men         | Women | Men         | Women  | Men                | Women  |
| Population       | 10.4 %      | 9.9 % | 26.7 %      | 25,4 % | 12.8 %             | 14.8 % |
| Net sample - w01 | 8.5 %       | 9.5 % | 28.4 %      | 28.8 % | 13.8 %             | 11,0 % |
| Net sample - w02 | 6.9 %       | 8.5 % | 27.6 %      | 28.7 % | 15.8 %             | 12.5 % |

Table 4 shows the combined effects of age and gender on response rates. Compared to the first wave, the net sample of the second wave has a larger under-representation of younger men and women, but this applies especially to men. Men and women between 30 and 59 years are over-represented, as in the net sample of the first wave. Men who are 60 years and above were over-represented in the first wave, and the over-representation has increased in the second wave. Women 60 years and above continue to be under-represented in the second wave, but the underrepresentation is reduced compared to the first wave. Overall, when assessing the dimensions of gender and age, the composition of the net sample corresponds quite well with the composition of the population.

Table 5: Combined distribution of age, gender and education in the population and the net sample of the first and second wave

|                                |              | Population |        | Net sample - w01 |        | Net sample - w02 |        |
|--------------------------------|--------------|------------|--------|------------------|--------|------------------|--------|
|                                |              | Men        | Women  | Men              | Women  | Men              | Women  |
| No education/elementary school | 18-29 years  | 4.5 %      | 3.6 %  | 1.0 %            | 1.5 %  | 0.7 %            | 1.2 %  |
| Upper secondary education      |              | 4.0 %      | 3.3 %  | 4.9 %            | 4.3 %  | 3.8 %            | 3.8 %  |
| University/university college  |              | 1.9 %      | 3.0 %  | 2.7 %            | 3.7 %  | 2.4 %            | 3.5 %  |
| No education/elementary school | 30-59 years  | 6.4 %      | 5.5 %  | 2.2 %            | 1.8 %  | 1.9 %            | 1.4 %  |
| Upper secondary education      |              | 11.9 %     | 9.2 %  | 10.4 %           | 8.3 %  | 9.5 %            | 7.9 %  |
| University/university college  |              | 8.4 %      | 10.7 % | 15.8 %           | 18.7 % | 16.2 %           | 19.4 % |
| No education/elementary school | 60 and above | 3.4 %      | 5.2 %  | 2.2 %            | 2.7 %  | 2.3 %            | 2.7 %  |
| Upper secondary education      |              | 6.2 %      | 7.0 %  | 4.4 %            | 3.2 %  | 4.8 %            | 3.5 %  |
| University/university college  |              | 3.1 %      | 2.6 %  | 7.3 %            | 5.2 %  | 8.8 %            | 6.2 %  |

When level of education is added to the equation, more substantial levels of bias appear. Table 5 reveals a systematic under-representation of individuals with no education above elementary school. Compared to the first wave this under-representation is amplified in the net sample of the second wave. Respondents belonging to the two lowest educational groups are systematically under-represented independent of gender and age. The under-representation is particularly strong for young men. As expected, individuals with education from universities or university colleges are systematically over-represented across all demographic segments. This over-representation has increased for men and women above 29 years, but been reduced for men and women in the age group of 18-29 years.

When it comes to geography, (table 6 below) we observe a slight under-representation of southern Norway, northern Norway and eastern Norway, and a corresponding over-representation of the capital area – the counties of Oslo and Akershus – and western Norway.<sup>2</sup> Young men and women in northern and southern Norway are especially under-represented, along with older men and women in northern Norway and older women in southern Norway. Older women are generally under-represented throughout the country, except in Oslo and Akershus. The same is true for young respondents throughout the country.

Middle-aged men are over-represented in Oslo/Akershus and western Norway, and slightly under-represented in the rest of the country. Middle-aged women are generally over-represented, except in Trøndelag and northern Norway, where they are slightly under-represented.

The loss of young men from the first to the second wave applies to all geographical areas, but especially in the eastern and southern parts of Norway. For young women the biggest loss is observed in the northern parts of Norway. Many middle-aged men in southern Norway also failed to answer the survey.

<sup>2</sup> A test with smaller geographical units shows that the counties of Sogn og Fjordane, Møre og Romsdal, Nord-Trøndelag, Finnmark, Troms and Hedmark are especially underrepresented. While the counties Oslo, Akershus, Hordaland and Rogaland are clearly overrepresented. Most of the underrepresented counties are thus located in the periphery of Norway.



Table 6: Combined distribution of age, gender and geography in the population and the net sample of the first and second wave

|               |              | Population |       | Net sample - w01 |       | Net sample - w02 |       |
|---------------|--------------|------------|-------|------------------|-------|------------------|-------|
|               |              | Men        | Women | Men              | Women | Men              | Women |
| Akershus Oslo | 18-29 years  | 2.5 %      | 2.6 % | 2.4 %            | 2.8 % | 2.0 %            | 2.6 % |
|               | 30-59 years  | 6.7 %      | 6.4 % | 7.7 %            | 8.3 % | 7.6 %            | 8.5 % |
|               | 60 and above | 2.5 %      | 3.0 % | 3.1 %            | 3.1 % | 4.0 %            | 3.7 % |
| Østlandet     | 18-29 years  | 2.5 %      | 2.4 % | 1.8 %            | 2.2 % | 1.2 %            | 2.0 % |
|               | 30-59 years  | 6.9 %      | 6.8 % | 6.2 %            | 7.3 % | 6.1 %            | 7.1 % |
|               | 60 and above | 3.8 %      | 4.5 % | 4.2 %            | 2.8 % | 4.7 %            | 3.4 % |
| Sørlandet     | 18-29 years  | 0.6 %      | 0.6 % | 0.5 %            | 0.5 % | 0.3 %            | 0.5 % |
|               | 30-59 years  | 1.5 %      | 1.4 % | 1.4 %            | 1.6 % | 0.9 %            | 1.7 % |
|               | 60 and above | 0.7 %      | 0.8 % | 0.8 %            | 0.6 % | 0.8 %            | 0.6 % |
| Vestlandet    | 18-29 years  | 2.8 %      | 2.6 % | 2.6 %            | 2.7 % | 2.0 %            | 2.2 % |
|               | 30-59 years  | 7.0 %      | 6.4 % | 8.1 %            | 7.4 % | 8.3 %            | 7.6 % |
|               | 60 and above | 3.2 %      | 3.7 % | 3.6 %            | 2.8 % | 4.3 %            | 3.2 % |
| Trøndelag     | 18-29 years  | 1.0 %      | 0.9 % | 0.9 %            | 0.8 % | 0.8 %            | 0.8 % |
|               | 30-59 years  | 2.2 %      | 2.1 % | 2.2 %            | 2.1 % | 2.1 %            | 2.0 % |
|               | 60 and above | 1.1 %      | 1.3 % | 1.1 %            | 0.8 % | 1.2 %            | 0.9 % |
| Nord-Norge    | 18-29 years  | 1.0 %      | 0.9 % | 0.7 %            | 0.6 % | 0.5 %            | 0.4 % |
|               | 30-59 years  | 2.4 %      | 2.3 % | 2.3 %            | 2.5 % | 2.4 %            | 2.3 % |
|               | 60 and above | 1.3 %      | 1.5 % | 0.9 %            | 0.7 % | 0.8 %            | 0.7 % |

## WEIGHTING THE DATA

To compensate for the observed bias, a set of weights has been calculated. The weights equal to the relation between a given strata in the population and the total population, divided by the relation between a given strata in the net sample and the total net sample.<sup>3</sup> This procedure returns values around 1, but above 0. Respondents belonging to a stratum which is under-represented will receive a weight above 1 and respondents belonging to an over-represented stratum will receive a weight below 1. The weights of the different strata are listed in table 8 in the appendix.<sup>4</sup>

When calculating the weights, the information regarding the respondent's geographical location, gender and age are based on registry data. These attributes were included in the sample file we received from the Norwegian Population Register. Information regarding the level of education is taken from the survey. Approximately 5.6 percent of the second wave net sample did not answer the question about level of education. Because of this, two different weights have been calculated:

- ◆ **Weight 1** is based on demographic variables only (age, gender and geography)

<sup>3</sup> The applied formula for weight  $w_i$  for element  $i$ , in strata  $h$  is:  $w_i = \frac{N_h/N}{n_h/n}$

<sup>4</sup> Two of the strata's in the net sample do not have any observations. The modified formula for weight  $w_i$  for element  $i$ , in strata  $h$  is therefore:  $w_i = \frac{N_h/N}{n_h/(n-(n_1+n_2))}$

- ◆ **Weight 2** combines the demographic variables with education. Respondents with missing data on the education variable are only weighted on demography (the education component of the weight is in these cases set to 1).

When applied, both weights will provide a weighted N equal to the number of cases in the dataset.

**Table 7: Effect of weight 2 on self-reported level of education**

|                                | W02<br>Sample -<br>not<br>weighted | W02<br>Sample -<br>weighted | Population | Difference<br>between<br>w02<br>sample and<br>population | Difference<br>between<br>weighted w02<br>sample and<br>population |
|--------------------------------|------------------------------------|-----------------------------|------------|--|---|
| No education/elementary school | 10.1 %                             | 28.3 %                      | 28.7 %     | -18.6 %  | -0.4 %  |
| Upper secondary education      | 33.4 %                             | 41.8 %                      | 41.5 %     | -8.1 %   | 0.3 %   |
| University/university college  | 56.5 %                             | 29.9 %                      | 29.8 %     | 26.7 %   | 0.1 %   |

We will strongly recommend using weight 2 in all statistical analysis, as this weight provides the most accurate compensation for the various sources of bias in the net sample. An illustration of this is provided in table 7, which shows the effect of weight 2 on the distribution of self-reported level of education in the net sample:

Weight 2 also brings the self-reported party voting of the net sample closer to the election results (table 8 below)<sup>5</sup>. The Socialist Left, The Green Party and The Liberal Party were clearly over-represented in the first wave, and are still over-represented in the second wave with 2.8, 1.2 and 2.7 percentage points respectively. The Progress Party and the Labour Party are under-represented with 4 and 1.9 percentage points respectively.

**Table 8: Effect of weight 2 on party affiliation**

|                                | Sample -<br>not<br>weighted | Sample -<br>weighted | Election<br>result | Difference<br>between<br>sample and<br>election<br>result | Difference<br>between<br>weighted<br>sample and<br>election result |
|--------------------------------|-----------------------------|----------------------|--------------------|---|--|
| The Christian Democratic Party | 5.5 %                       | 4.8 %                | 5.6 %              | -0.1 %  | -0.8 %   |
| The Conservative Party         | 27.4 %                      | 27.5 %               | 26.8 %             | 0.6 %   | 0.7 %  |
| The Progress Party             | 12.3 %                      | 14.4 %               | 16.3 %             | -4.0 %  | -1.9 %   |
| The Liberal Party              | 7.9 %                       | 6.9 %                | 5.2 %              | 2.7 %   | 1.7 %  |
| The Socialist Left Party       | 6.9 %                       | 5.6 %                | 4.1 %              | 2.8 %   | 1.5 %  |
| The Centre Party               | 3.8 %                       | 4.0 %                | 5.5 %              | -1.7 %  | -1.5 %   |
| The Green Party                | 4.0 %                       | 3.2 %                | 2.8 %              | 1.2 %   | 0.4 %  |
| The Labour Party               | 28.9 %                      | 30.4 %               | 30.8 %             | -1.9 %  | -0.4 %   |
| Red                            | 1.9 %                       | 1.8 %                | 1.1 %              | 0.8 %   | 0.7 %  |
| Other                          | 1.4 %                       | 1.5 %                | 1.8 %              | -0.4 %  | -0.3 %   |

The weighted distribution corresponds fairly well with the election results, though slightly more biased compared to the first wave as would be expected. Firstly, in the case of The Christian Democrats the weight has

<sup>5</sup> The self-reported party voting is collected from question w01\_k3 asked in the first wave as opposed to question w02\_k204 in asked in the second wave. The first question asks what party they voted for at the parliamentary election in 2013, as opposed to the latter that asks what party they would vote for if there were an election tomorrow. This procedure is preferable since the w01\_k3 is temporally closer to the parliamentary election, which is a known population suitable as a reference for weighting.

in fact increased the difference between the sample and the actual election result. This was also the fact in wave 1. Secondly, in the case of The Centre Party, applying the weight has a marginal effect and the weighted result is only 0.2 percent points closer to the election result. Both of these parties has a distinct geographical distribution of the vote, which partly cuts across the over-simplified geographical stratification used when calculating the weights.

As could be expected, table 9 shows that the self-reported election turn-out in the net sample is higher than the official turn-out in the parliamentary election (89.9% compared to the official turn-out of 77.7%). This is partly due to the fact that the second wave net sample is over-represented by individuals with higher education. Moreover, as reported by the Norwegian Election Survey Program, Norwegians have a tendency to report that they voted even in cases where they abstained. As much as four percent of the respondents in The Norwegian Election Survey report that they voted at the 2009 election, when registry data showed that they did not.<sup>6</sup>

Table 9: Effect of weight 2 on election turn-out in the second wave

| Not weighted | Weighted | Population | Not weighted - population | Weighted - population |
|--------------|----------|------------|---------------------------|-----------------------|
| 89.9 %       | 88.6 %   | 77.7 %     | 12.2 %                    | 10.9 %                |

Applying weight 2 brings the survey result closer to the official turnout, but only marginally. A substantial part of the remaining difference is probably caused by the tendency to over-report the turnout.

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## SURVEY EXPERIMENTS

The second wave of the Citizen Panel Survey includes several survey experiments where different groups of respondents received questions with slightly different wordings. This was achieved by randomly assigning respondents to groups during the data collection process. In addition, there is also a more permanent split of the respondents in two groups. To reduce the overall time required to answer the survey, some sections of the questionnaire were only presented to one of these groups. For both of these reasons, the number of respondents who have answered a single question might be substantially less than the total number of respondents. See the detailed data documentation for further information about this.

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<sup>6</sup> Berglund, Frode, Ingvild S. Reymert og Bernt Aardal (2011). *Valgundersøkelsen 2009. Dokumentasjonsrapport*. Statistisk Sentralbyrå, Oslo – Kongsvinger.

APPENDIX

Table 10: Weights applied to different stratum (weight 2)

|                 |              |                                | Men  | Women |                 |              |                                | Men | Women |
|-----------------|--------------|--------------------------------|------|-------|-----------------|--------------|--------------------------------|-----|-------|
| Oslo/Akershus   | 18-29 years  | No education/elementary school | 6.5  | 3.0   | Western Norway  | 18-29 years  | No education/elementary school | 4.7 | 4.2   |
|                 |              | Upper secondary education      | 0.9  | 0.7   |                 |              | Upper secondary education      | 0.9 | 1.0   |
|                 |              | University/university college  | 0.7  | 0.8   |                 |              | University/university college  | 0.9 | 0.7   |
|                 | 30-59 years  | No education/elementary school | 3.4  | 8.3   |                 | 30-59 years  | No education/elementary school | 3.1 | 3.9   |
|                 |              | Upper secondary education      | 1.1  | 1.0   |                 |              | Upper secondary education      | 1.0 | 1.0   |
|                 |              | University/university college  | 0.5  | 0.5   |                 |              | University/university college  | 0.5 | 0.6   |
|                 | 60 and above | No education/elementary school | 0.9  | 1.4   |                 | 60 and above | No education/elementary school | 1.5 | 1.7   |
|                 |              | Upper secondary education      | 1.3  | 2.0   |                 |              | Upper secondary education      | 1.2 | 1.8   |
|                 |              | University/university college  | 0.3  | 0.3   |                 |              | University/university college  | 0.3 | 0.4   |
| Eastern Norway  | 18-29 years  | No education/elementary school | 12.8 | 2.1   | Trøndelag       | 18-29 years  | No education/elementary school | 4.1 | 1.9   |
|                 |              | Upper secondary education      | 1.2  | 0.9   |                 |              | Upper secondary education      | 0.8 | 0.8   |
|                 |              | University/university college  | 1.2  | 0.9   |                 |              | University/university college  | 0.8 | 1.1   |
|                 | 30-59 years  | No education/elementary school | 3.6  | 4.8   |                 | 30-59 years  | No education/elementary school | 2.5 | 2.1   |
|                 |              | Upper secondary education      | 1.5  | 1.2   |                 |              | Upper secondary education      | 1.2 | 2.0   |
|                 |              | University/university college  | 0.5  | 0.5   |                 |              | University/university college  | 0.7 | 0.7   |
|                 | 60 and above | No education/elementary school | 1.6  | 2.2   |                 | 60 and above | No education/elementary school | 1.6 | 1.9   |
|                 |              | Upper secondary education      | 1.2  | 1.9   |                 |              | Upper secondary education      | 1.3 | 1.8   |
|                 |              | University/university college  | 0.4  | 0.4   |                 |              | University/university college  | 0.4 | 0.7   |
| Southern Norway | 18-29 years  | No education/elementary school | -    | 3.4   | Northern Norway | 18-29 years  | No education/elementary school | 8.1 | 6.0   |
|                 |              | Upper secondary education      | 1.0  | 0.7   |                 |              | Upper secondary education      | 1.9 | 1.6   |
|                 |              | University/university college  | 1.4  | 4.7   |                 |              | University/university college  | 0.4 | 1.2   |
|                 | 30-59 years  | No education/elementary school | -    | 2.6   |                 | 30-59 years  | No education/elementary school | 2.9 | 2.1   |
|                 |              | Upper secondary education      | 2.5  | 1.1   |                 |              | Upper secondary education      | 1.4 | 1.4   |
|                 |              | University/university college  | 0.8  | 0.5   |                 |              | University/university college  | 0.5 | 0.7   |
|                 | 60 and above | No education/elementary school | 2.8  | 1.7   |                 | 60 and above | No education/elementary school | 2.4 | 4.3   |
|                 |              | Upper secondary education      | 1.5  | 3.4   |                 |              | Upper secondary education      | 2.6 | 2.8   |
|                 |              | University/university college  | 0.3  | 0.6   |                 |              | University/university college  | 0.7 | 0.7   |